

SEQUENCE LISTING

SEQ ID NO:1

Mouse SSG amino acid sequence

5 MGELPFLSPEGARGPHINRGSLSSEQGSVTGTEARHSLGVLHVSYSVSNRVGPWWNIKS
CQQKWDRQILKDVSLYIESGQIMCILGSSSGSGKTTLLDAISGRLRRTGTLEGEV FVNGCE
LRDQFQDCFSYVLQSDVFLSSLTVRETLRYTAMLALCRSSADFYNNKKVEAVMTELSLSH
VADQMIGSYNFGGISSGERRRVSI AQLLQDPKVMMLDEPTTGLDCMTANQIVLLLAE LA
RRDRIVIVTIIHQPRSELFQHFDKIAILTYGELVFCGTPEEMLGFFNNCGYPCPEHSNPF D
10 FYMDLTSVDTQSREREIETYKRVQMLECAFKESDIYHKILENIERARYLKTLPMPFKTK
DPPGMFGKLGVLRLRVTRNLMRNKQAVIMRLVQNLIMGLFLIFYLLRVQNNTLKGAVQDR
VGLLYQLVGATPYTGMLNAVNLFPMLRAVSDQESQDGLYHKWQMLLAYVLHVLPPFSVIAT
VIFSSVCYWTLGLYPEVARFGYFSAALLAPHLIGEFLLVLLGIVQNPNI VNSIVALLSI
SGLLIGSGFIRNIQEMPIPLKILGYFTFQKYCCEILVVNEFYGLNFTCGGSNTSMLNHPM
15 CAITQGVQFIEKTCPGATSRFTANFLILYGFIPALVILGIVIFKVRDYLI SR

SEQ ID NO:2

Mouse SSG nucleotide sequence

20 GGGACAGGCCACTAGAAAATTCACCTGCATTTGCTTCCTGCTAGCCATGGGTGAGCTGCC
CTTTCTGAGTCCAGAGGGAGCCAGAGGGCCTCACATCAACAGAGGGTCTCTGAGCTCCCT
GGAGCAAGGTTTCGGTCACGGGCACAGAGGCTCGGCACAGCTTAGGTGTCCTGCATGTGTC
CTACAGCGTCAGCAACCGTGTCTGGGCCTTGGTGGAACATCAAATCATGCCAGCAGAAGTG
GGACAGGCAAATCCTCAAAGATGTCTCCTTGACATCGAGAGTGGCCAGATTATGTGCAT
25 CTTAGGCAGCTCAGGCTCAGGGAAGACCACGCTGCTGGACGCCATCTCCGGGAGGCTGCG
GCGCACTGGGACCCTGGAAGGGGAGGTGTTTGTGAATGGCTGCGAGCTGCGCAGGGACCA
GTTCCAAGACTGCTTCTCCTACGTCCTGCAGAGCGACGTTTTTCTGAGCAGCCTCACTGT
GCGCGAGACGTTGCGATACACAGCGATGCTGGCCCTCTGCCGAGCTCCGCGGACTTCTA
CAACAAGAAGGTAGAGGCAGTCATGACAGAGCTGAGCCTGAGCCACGTGGCGGACCAAAT
30 GATTGGCAGCTATAATTTTGGGGGAATTTCCAGTGGCGAGCGGCGCCGAGTTTCCATCGC
AGCCCAACTCCTTCAGGACCCCAAGGTCATGATGCTAGATGAGCCAACCACAGGACTGGA
CTGCATGACTGCAAATCAAATTGTCTTCTCTTGGCTGAGCTGGCTCGCAGGGACCGAAT
TGTGATTGTCACCATCCACCAGCCTCGCTCTGAGCTCTTCCAACACTTCGACAAAATTGC
CATCCTGACTTACGGAGAGTTGGTGTCTGTGGCACCCAGAGGAGATGCTTGGCTTCTT

CAATAACTGTGGTTACCCCTGTCTGAACATTCCAATCCCTTTGATTTTTACATGGACTT
GACATCAGTGGACACCCAAAGCAGAGAGCGGGAAATAGAAACGTACAAGCGAGTACAGAT
GCTGGAATGTGCCTTCAAGGAATCTGACATCTATCACAAAATTCTGGAGAACATTGAAAG
AGCACGATACCTGAAAACCTTACCCATGGTTCCTTTCAAAACAAAAGATCCTCCTGGGAT
5 GTTCGGCAAGCTTGGTGTCTGCTGAGGCGAGTAACAAGAACTTAATGAGGAATAAGCA
GGCAGTGATTATGCGTCTCGTTCAGAATCTGATCATGGGCCTCTTCCTCATTTCCTACCT
TCTCCGCGTCCAGAACACACGCTAAAGGGCGCTGTGCAGGACCGCGTGGGGCTGCTCTA
TCAGCTTGTGGGTGCCACCCCATACACCGGCATGCTCAATGCTGTGAATCTGTTTCCCAT
GCTGAGAGCCGTCAGCGACCAGGAGAGTCAGGATGGCCTGTATCATAAGTGGCAGATGCT
10 GCTCGCCTACGTGCTACACGTCCTCCCCTTCAGCGTCATCGCCACGGTCATTTTCAGCAG
TGTGTGTTATTGGACTCTGGGCTTGTATCCTGAAGTTGCCAGATTGGATATTTCTCTGC
TGCTCTTTTGGCCCCCTCACTTAATTGGAGAATTTCTAACACTTGTGCTGCTTGGTATAGT
CCAAAACCCTAATATTGTCAACAGTATAGTGGCTCTGCTCAGCATCTCTGGGCTGCTTAT
TGGATCTGGATTTATCAGAAACATACAAGAAATGCCCATTCCTTTAAAAATCCTGGGTTA
15 TTTTACATTCCAAAAATACTGTTGTGAGATTCTCGTGGTCAATGAGTTTTACGGCCTGAA
CTTCACTTGTGGTGGATCCAACACCTCTATGCTAAATCACCCGATGTGCGCCATCACCCA
AGGGGTCCAGTTCATCGAGAAAACCTGCCAGGTGCTACATCCAGATTACGGCAAACCTT
CCTCATCTTATATGGGTTTATCCCAGCTCTGGTCATCCTAGGAATAGTGATTTTTAAAGT
CAGGGACTACCTGATTAGCAGATAGTTAAGATGACAGGCAGGAAAGGGTTAATGGGCAGG
20 CACGCCCCTGTGGAGCACAGAGAAGTACTGTCTTCAACCATCAGGATTCCATCTGCGAC
CCTTGTGTCTGACCCTTGTGTCTATCCGGAGCCCCAAGGGCAACGAGAACTCACAGCCCT
CTGCTATTCCAGCTTGTGGGGCAATGTGGTGCTTGGACATTGTGACTGAACTGGTCCAAT
AATGTAAATAATAATAATTCATAAACCTACAGGACATT

SEQ ID NO:3

Human SSG amino acid sequence

MGDLSSLTPGGSMGLQVNRGSQSSLEGAPATAPEPHSLGILHASYSVSHRVRPWWDTSC
30 RQQWTRQILKDVSLYVESGQIMCILGSSGSGKTTLLDAMSGRLGRAGTFLGEVYVNGRAL
RREQFQDCFSYVLQSDTLLSSLTVRETLHYTALLAIRGNPGSFQKKVEAVMAELSLSHV
ADRLIGNYSLGGISTGERRRVSIQAQLLQDPKVMLFDEPTTGLDCMTANQIVVLLVELAR
RNRIVVLTIHQPRSELFQLFDKIAILSFGELIFCGTPAEMLDFFNDCGYPCPEHSNPFDF
YMDLTSVDTQSKEREIETSKRVQMIESAYKKSALCHKTLKNIERMKHLKTLPMVPFKTKD

SPGVFSKLGVLRLRRVTRNLVRNKLAVITRLLQNLIMGLFLLFFVLRVRSNVLKGAIQDRV
 GLLYQFVGATPYTGMLNAVNLFPVLRVSDQESQDGLYQKWQMLLAYALHVLFPFSVVATM
 IFSSVCYWTGLGLHPEVARFGYFSAALLAPHLIGEFLLVLLGIVQNPNI VNSVVALLSIA
 GVLVSGSGLRNIQEMPIPFKIIISYFTFQKYCSEILVNEFYGLNFTCGSSNVSVTTNPMC
 5 AFTQGIQFIEKTCPGATSRFTMNFLILYSFIPALVILGIVVFKIRDHLISR

SEQ ID NO:4

Human SSG nucleotide sequence

10

GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGGCTCCCCAACTGAAGCCACTCTGGGGA
 GGGTCCGGCCACCAGAAAAATTTGCCAGCTTTGCTGCCTGTTGGCCATGGGTGACCTCTC
 ATCTTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCCAGAGCTCCCT
 GGAGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGGCATCCTCCATGCCTCCTA
 15 CAGCGTCAGCCACCGCGTGAGGCCCTGGTGGGACATCACATCTTGCCGGCAGCAGTGGAC
 CAGGCAGATCCTCAAAGATGTCTCCTTGTACGTGGAGAGCGGGCAGATCATGTGCATCCT
 AGGAAGCTCAGGCTCCGGGAAAACCACGCTGCTGGACGCCATGTCCGGGAGGCTGGGGCG
 CGCGGGGACCTTCTGGGGGAGGTGTATGTGAACGGCCGGGCGCTGCGCCGGGAGCAGTT
 CCAGGACTGCTTCTCCTACGTCTGCGAGAGCGACACCCTGCTGAGCAGCCTCACCGTGCG
 20 CGAGACGCTGCACTACACCGCGCTGCTGGCCATCCGCCGCGGCAATCCCGGCTCCTTCCA
 GAAGAAGGTGGAGGCCGTCATGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGAT
 TGGCAACTACAGCTTGGGGGGCATTTCACGGGTGAGCGGCGCGGGTCTCCATCGCAGC
 CCAGCTGCTCCAGGATCCTAAGGTCATGCTGTTTGATGAGCCAACCACAGGCCTGGACTG
 CATGACTGCTAATCAGATTGTGCTCCTCCTGGTGGAACTGGCTCGCAGGAACCGAATTGT
 25 GGTTCTCACCATTACACAGCCCCGTTCTGAGCTTTTTTCAGCTCTTTGACAAAATTGCCAT
 CCTGAGCTTCGGAGAGCTGATTTTCTGTGGCACGCCAGCGGAAATGCTTGATTTCTTCAA
 TGACTGCGGTTACCCTTGTCTGAACATTCAAACCTTTTGACTTCTATATGGACCTGAC
 GTCAGTGGATACCCAAAGCAAGGAACGGGAAATAGAAACCTCCAAGAGAGTCCAGATGAT
 AGAATCTGCCTACAAGAAATCAGCAATTTGTCATAAACTTTGAAGAATATTGAAAGAAT
 30 GAAACACCTGAAAACGTTACCAATGGTTTCCTTTCAAACCAAAGATTCTCCTGGAGTTTT
 CTCTAAACTGGGTGTTCTCCTGAGGAGAGTGACAAGAACTTGGTGAGAAATAAGCTGGC
 AGTGATTACGCGTCTCCTTCAGAATCTGATCATGGGTTTGTTCCTCCTTTTCTTCGTTCT
 GCGGGTCCGAAGCAATGTGCTAAAGGGTGCTATCCAGGACCGCGTAGGTCTCCTTTACCA
 GTTTGTGGGCGCCACCCCGTACACAGGCATGCTGAACGCTGTGAATCTGTTTCCCGTGCT

GCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGCAGATGATGCT
 GGCCTATGCACTGCACGTCTCTCCCTTCAGCGTTGTTGCCACCATGATTTTCAGCAGTGT
 GTGCTACTGGACGCTGGGCTTACATCCTGAGGTTGCCCGATTTGGATATTTTTCTGCTGC
 TCTCTTGGCCCCCCTTAATTGGTGAATTTCTAACTCTTGTGCTACTTGGTATCGTCCA
 5 AAATCCAAATATAGTCAACAGTGTAGTGGCTCTGCTGTCCATTGCGGGGGTGCTTGTG
 ATCTGGATTCTCAGAAACATACAAGAAATGCCCATTCCTTTTAAAATCATCAGTTATTT
 TACATTCCAAAAATATTGCAGTGAGATTCTTGTAGTCAATGAGTTCTACGGACTGAATTT
 CACTTGTGGCAGCTCAAATGTTTCTGTGACAATAATCCAATGTGTGCCTTCACTCAAGG
 AATTCAATTCATTGAGAAAACCTGCCCAGGTGCAACATCTAGATTCACAATGAACTTTCT
 10 GATTTTGTATTCAATTTATTCCAGCTCTTGTATCCTAGGAATAGTTGTTTTCAAAATAAG
 GGATCATCTCATTAGCAGGTAGTGAAAGCCATGGCTGGGAAAATGGAAGTGAAGCTGCCG
 ACTGTGCATGACTGCTCTGAACGTCTGAAATGAGAGTGCCATGTATTTCTTCTTGACAG
 GACATCTCAAGTCTTTTAACCATTAAAGACTCCATTTGTGCCTCTTGGATCCAAGCAGGCC
 TTGAATGCAATGGAAGTGGTTTATAGTCCCTTGCTCTTACAACCTTGCAGGGACATGTGGT
 15 TATTTGGAAATTGTGACTGAGCGGACCCAAGAATGTAAATAATATTCATAAACCTATGGG

SEQ ID NO:5

SSG signature sequence 1

20

AALLAPHLIGEFLTLVLL

SEQ ID NO:6

25 SSG signature sequence 2

FIPALVILGIV

SEQ ID NO:7

30 Exon 1 of hSSG

GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGGCTCCCCAACTGAAGCCACTCTGGGGA
 GGGTCCGGCCACCAGAAAATTTGCCCAGCTTTGCTGCCTGTTGGCCATGGGTGACCTCTC
 ATCTTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCCAGAGCTCCCT

GGAGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGGCATCCTCCATGCCTCCTA
CAGCGTCAG

5 **SEQ ID NO:8**

Exon 2 of hSSG

CCACCGCGTGAGGCCCTGGTGGGACATCACATCTTGCCGGCAGCAGTGGACCAGGCAGAT
CCTCAAAGATGTCTCCTTGTACGTGGAGAGCGGGCAGATCATGTGCATCCTAGGAAGCTC

10 AG

SEQ ID NO:9

Exon 3 of hSSG

15 GCTCCGGGAAAACCACGCTGCTGGACGCCATGTCCGGGAGGCTGGGGCGCGCGGGGACCT
TCCTGGGGGAGGTGTATGTGAACGGCCGGGCGCTGCGCCGGGAGCAGTTCCAGGACTGCT
TCTCCTACGTCCTGCAG

SEQ ID NO:10

20 Exon 4 of hSSG

AGCGACACCCTGCTGAGCAGCCTCACCGTGCGCGAGACGCTGCACTACACCGCGCTGCTG
GCCATCCGCCGCGGCAATCCCGGCTCCTTCCAGAAGAAGGTGG

25 **SEQ ID NO:11**

Exon 5 of hSSG

AGGCCGTTCATGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGATTGGCAACTACA
GCTTGGGGGGCATTTCACGGGTGAGCGGCGCCGGGTCTCCATCGCAGCCCAGCTGCTCC

30 AGGATCCTA

SEQ ID NO:12

Exon 6 of hSSG

AGGTCATGCTGTTTGATGAGCCAACCACAGGCCTGGACTGCATGACTGCTAATCAGATTG
TCGTCCTCCTGGTGGAACTGGCTCGCAGGAACCGAATTGTGGTTCTCACCATTACCAGC
CCCGTTCTGAGCTTTTTCAG

5 **SEQ ID NO:13**

Exon 7 of hSSG

CTCTTTGACAAAATTGCCATCCTGAGCTTCGGAGAGCTGATTTTCTGTGGCAGCCAGCG
GAAATGCTTGATTTCTTCAATGACTGCGGTTACCCTTGTCTGAACATTCAAACCCCTTTT

10 GACTTCTATA

SEQ ID NO:14

Exon 8 of hSSG

15 TGGACCTGACGTCAGTGGATACCCAAAGCAAGGAACGGGAAATAGAAACCTCCAAGAGAG
TCCAGATGATAGAATCTGCCTACAAGAAATCAGCAATTTGTCATAAACTTTGAAGAATA
TTGAAAGAAATGAAACACCTGAAAACGTTACCAATGGTTCCTTTCAAACCAAAGATTCTC
CTGGAGTTTTCTCTAAACTGGGTGTTCTCCTGAG

20 **SEQ ID NO:15**

Exon 9 of hSSG

GAGAGTGACAAGAACTTGGTGAGAAATAAGCTGGCAGTGATTACGCGTCTCCTTCAGAA
TCTGATCATGGGTTTGTTCCTCCTTTTCTTCGTTCTGCGGGTCCGAAGCAATGTGCTAAA
25 GGGTGCTATCCAGGACCGCGTAGGTCTCCTTTACCAGTTTGTGGGCGCCACCCCGTACAC
AGGCATGCTGAACGCTGTGAATCTGT

SEQ ID NO:16

Exon 10 of hSSG

30

TTCCCGTGCTGCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGC
AGATGATGCTGGCCTATGCACTGCACGTCCTCCCCTTCAGCGTTGTTGCCACCATGATTT
TCAGCAGTGTGTGCTACTG

SEQ ID NO:17

Exon 11 of hSSG

5 GACGCTGGGCTTACATCCTGAGGTTGCCCGATTTGGATATTTTTCTGCTGCTCTCTTGGC
CCCCCACTTAATTGGTGAATTTCTAACTCTTGTGCTACTTGGTATCGTCCAAAATCCAAA
TATAGTCAACAGTGTAGTGGCTCTGCTGTCCATTGCGGGGGTGCTTGTGGATCTGGATT
CCTCAG

SEQ ID NO:18

10 Exon 12 of hSSG

AAACATACAAGAAATGCCCATTCCTTTTAAAATCATCAGTTATTTTACATTCCAAAAATA
TTGCAGTGAGATTCTTGTAGTCAATGAGTTCTACGGACTGAATTTCACTTGTG

15 **SEQ ID NO:19**

Exon 13 of hSSG

GCAGCTCAAATGTTTCTGTGACAACTAATCCAATGTGTGCCTTCACTCAAGGAATTCAAT
TCATTGAGAAAACCTGCCAGGTGCAACATCTAGATTCACAATGAACTTTCTGATTTTGT
20 ATTCATTTATTCCAGCTCTTGTTCATCCTAGGAATAGTTGTTTTCAAAAATAAGGGATCATC
TCATTAGCAGGTAGTGAAAGCCATGGCTGGGAAAAATGGAAGTGAAGCTGCCGACTGTGCA
TGACTGCTCTGAACGTCTGAAATGAGAGTGCCATGTATTTCTTTCTTGACAGGACATCTC
AAGTCTTTTAACCATTAAGACTCCATTTGTGCCTCTTGGATCCAAGCAGGCCTTGAATGC
AATGGAAGTGGTTTATAGTCCCTTGCTCTTACAACTTGCAGGGACATGTGGTTATTTGGA
25 AATTGTGACTGAGCGGACCCAAGAATGTAAATAATATTCATAAACCTATGGG